

REMARKS

Applicants ask that all claims be examined in view of the amendments to the claims and the following remarks.

Claims 1-9, 11-17, 19-21, 23 and 24 are pending. Claims 1, 2, 11, 15, 17, 21, 23 and 24 are currently amended. Claims 10, 18 and 22 have been canceled.

Claim 15 was objected to because it should have read "a light emitting layer" instead of "a light omitting layer." Applicants agree and have amended claim 15 to incorporate that change.

Claims 1, 5, 6, 8, 9 and 11-13 were rejected under 35 U.S.C. §103(a) as being obvious in view of the applicant's admitted prior art in view of U.S. Patent No. 5,834,797 (Yamanaka). Applicants have amended claim 1 and respectfully request reconsideration and withdrawal of those rejections.

Claim 1 has been amended to recite that the second gate electrode, which is formed between a first gate electrode and a display electrode, covers a *larger area* than the first gate electrode. Support for that amendment can be found, for example, on page 12, lines 17 – 21 with reference to FIG. 7A and 7B. No new matter has been added. In certain implementations, the features recited in claim 1 may prevent ambient light from entering the space beneath the second electrode. That may enhance the brightness characteristics of a display device. Neither the applicant's admitted prior art, the Yamanaka patent nor any combination of those references disclose or suggest that feature.

The Office Action itself concedes that the applicant's admitted prior art does not disclose a second gate electrode that is formed between a first gate electrode and a display electrode. (*See* Office Action, page 3) Therefore, applicant's admitted prior art also does not disclose a second gate electrode that covers a larger area than the first gate electrode, as is recited in claim 1.

The Yamanaka patent discloses a first gate electrode G1 and a second gate electrode G2. (See FIGs. 1A and 1B) The second gate electrode G2 does not cover a larger area than the first gate electrode G1. Indeed, neither the second gate electrode G2, disclosed in FIG. 1A, nor the second gate electrode G2, disclosed in FIG. 1B, cover an area that is larger than the respective first gate electrodes G1 in those figures.

Claim 1 should be allowable for at least the foregoing reasons.

Claim 1 also should be allowable for the following additional reasons.

Claim 1 has been amended to incorporate subject matter previously recited in claim 10, which has been canceled. Claim 1 now recites that the elongated display electrode *above* the thin film transistor is *reflective*. Certain implementations of the features recited in claim 1 result in a display device with improved brightness. Applicant's admitted prior art does not disclose that feature.

The Yamanaka patent also does not disclose that feature. In particular, the pixel electrode 10, shown in FIG. 13 of the Yamanaka patent is not reflective. Nor are any of the other layers above the liquid semiconductor device 1 of FIG. 13 a reflective electrode. That is evident from FIG. 13 itself, which shows incident light passing through each layer of the liquid crystal driving device 11 and to a reflective surface that is located *below* (*i.e.* not above) the semiconductor device 1.

Claim 1 should be allowable for at least the foregoing additional reasons as well.

Claims 5, 6, 8, 9 and 11-13 depend from claim 1 and, therefore, should be allowable for at least the same reasons as claim 1.

Claims 21 and 23 also were rejected under 35 U.S.C. §103(a) as being obvious in view of the applicant's admitted prior art in view of the Yamanaka patent. Claim 21 has been amended in a manner similar to claim 1. Therefore, claim 21 should be allowable for at least the same reasons as discussed above with reference to claim 1.

Claim 23 depends from claim 21 and, therefore, should be allowable for at least the same reasons as claim 21.

Claims 2-4 and 15 were rejected under 35 U.S.C. §103(a) as being obvious over applicant's admitted prior art in view of U.S. Patent No. 5,702,963 (Vu et al.).

Claim 2 has been amended in a manner similar to claim 1. More specifically, claim 2 now recites: 1) a display electrode, elongated so as to extend above a channel of the thin film transistor, is reflective; and 2) the second gate electrode, formed between a first gate electrode and the display electrode, covers a larger area than the first gate electrode. As discussed above, applicant's admitted prior art does not disclose those features.

The Vu et al. patent also fails to disclose those features. Instead, the Vu et al. patent discloses a dual gate metal oxide semiconductor field effect transistor (MOSFET) having first and second gates G1 and G2 that are connected to each other by a conductor. (See FIG. 15G) No mention is made of a reflective display electrode that is elongated so as to extend above a channel of a thin film transistor. Nor is the second gate formed between a first gate electrode and a display electrode.

Claim 2 should be allowable for at least the foregoing reasons.

Claims 3, 4 and 15 depend from claim 2 and, therefore, should be allowable for at least the same reasons as claim 2.

Claims 17-19 also were rejected under 35 U.S.C. §103(a) as being obvious over applicant's admitted prior art in view of the Vu et al. patent.

Claim 17 has been amended to recite: 1) a display electrode, extended above a channel region of a thin film transistor, is reflective; and 2) an electrode, provided between the channel region and the display electrode, covers a larger area than a gate electrode of the thin film

transistor. For reasons similar to those discussed above with reference to claim 2, none of the cited references discloses or suggests those features.

Claim 17 should be allowable for at least the foregoing reasons.

Claims 18 and 19 depend from claim 17 and, therefore, should be allowable for at least the same reasons as claim 17.

Claim 7 was rejected under 35 U.S.C. §103(a) as being obvious over applicant's admitted prior art in view of the Yamanaka patent and further in view of U.S. Patent No. 6,100,954 (Kim et al.).

Claim 7 depends from claim 1, which recites: 1) a display electrode, elongated so as to extend above a channel of a thin film transistor, is reflective; and 2) a second gate electrode, formed between a first gate electrode and the display electrode, covers a larger area than the first gate electrode. For at least the reasons discussed above with reference to claim 1, neither applicant's admitted prior art, nor the Yamanaka patent discloses or suggests those features.

The Kim et al. patent also fails to disclose or suggest those features. The Kim et al. patent merely discloses a liquid crystal display device that includes a planarizing organic gate insulator and an organic planarizing layer. The Kim et al. patent does not even mention a reflective display electrode that is elongated to extend above a channel of a thin film transistor. Nor does the Kim et al. patent disclose a second gate electrode, formed between a first gate electrode and the display electrode, that covers a larger area than the first gate electrode.

Claim 7 should be allowable for at least the foregoing reasons.

Claim 14 was rejected under 35 U.S.C. §103(a) as being obvious over Applicant's admitted prior art in view of the Yamanaka patent and further in view of U.S. Patent No. 5,550,066 (Tang et al.).

Claim 14 depends from claim 1, which recites: 1) a display electrode, elongated so as to extend above a channel of a thin film transistor, is reflective; and 2) a second gate electrode,

formed between a first gate electrode and the display electrode, covers a larger area than the first gate electrode. For at least the reasons discussed above with reference to claim 1, neither applicant's admitted prior art, nor the Yamanaka patent discloses or suggests those features.

The Tang et al. patent also does not disclose or suggest those features. The Tang et al. patent merely discloses a four terminal active matrix electroluminescent device that utilizes an organic material as the electroluminescent medium. The Tang et al. patent does not even mention a reflective display electrode, elongated to extend above a channel of a thin film transistor. Nor does the Tang et al. patent disclose a second gate electrode that is formed between a first gate electrode and the display electrode and that covers a larger area than the first gate electrode.

Claim 14 should be allowable for at least the foregoing reasons.

Claim 24 also was rejected under 35 U.S.C. §103(a) as being obvious over Applicant's admitted prior art in view of the Yamanaka patent and further in view of the Tang et al. patent.

Claim 24 depends from claim 21, which recites: 1) a display electrode, extended above a channel region of a thin film transistor, is reflective; and 2) an electrode, provided between a channel region of the thin film transistor and the display electrode, covers a larger area than the first gate electrode. For reasons similar to those discussed above with reference to claim 14, none of the cited references discloses or suggests those features.

Claim 24 should be allowable for at least the foregoing reasons.

Claim 16 was rejected under 35 U.S.C. §103(a) as being obvious over applicant's admitted prior art in view of the Vu et al. and Tang et al. patents.

Claim 16 depends from claim 2, which recites: 1) a display electrode, elongated so as to extend above a channel of the thin film transistor, is reflective; and 2) the second gate electrode, formed between a first gate electrode and the display electrode, covers a larger area than the first gate electrode. For at least the reasons discussed above with reference to claim 2, applicant's

admitted prior art does not disclose or suggest those features. Nor do the Vu et al. or Tang et al. patents disclose or suggest those features.

As discussed above, the Tang et al. patent merely discloses a four terminal active matrix electroluminescent device that utilizes an organic material as the electroluminescent medium. The Tang et al. patent does not even mention a reflective display electrode that is elongated so as to extend above a channel of a thin film transistor. Nor does the Tang et al. patent mention a second gate electrode, formed between a first gate electrode and the display electrode, that covers a larger area than the first gate electrode.

Claim 16 should be allowable for at least the foregoing reasons.

Claim 20 also was rejected under 35 U.S.C. §103(a) as being obvious over applicant's admitted prior art in view of the Vu et al. and Tang et al. patents.

Claim 20 depends from claim 17, which recites: 1) a display electrode, extended above a channel region of a thin film transistor, is reflective; and 2) an electrode, provided between a channel region of the thin film transistor and the display electrode, covers a larger area than a gate electrode of the thin film transistor.

For at least the same reasons discussed above with reference to claim 17, applicant's admitted prior art neither discloses nor suggests those features. Nor do the Vu et al. or Tang et al. patents disclose or suggest those features.

As mentioned above, the Tang et al. patent merely discloses a four terminal active matrix electroluminescent device that utilizes an organic material as the electroluminescent medium. The Tang et al. patent does not even mention a reflective display electrode that extends above a channel region of a thin film transistor. Nor does the Tang et al. patent mention an electrode that is provided between a channel of a thin film transistor and a display electrode and that covers a larger area than a gate electrode of the thin film transistor.

Claim 20 should be allowable for at least the foregoing reasons.

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It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Enclosed is a \$570 check for the Petition for Extension of Time fee and a \$790.00 check for the Request for Continued Examination fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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